

Curriculum Alignment Initiative Update

2009 COTA Transfer Conference
January 30, 2009

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Vision of the Curriculum Alignment Initiative

- Smooth transition points
- Send consistent messages to student pipeline
- Raise rigor and improve postsecondary success
- Demonstrate effectiveness of local autonomy

Curriculum Alignment Initiative

Seeks to:

- Establish minimum threshold for entry into collegiate courses
- Reduce the need for remediation
- Ensure transferability of single general education courses

Competencies Model

Four Step Approach:

- Articulate implicit expectations
- Link competencies to assessment
- Identify policy implications
- Stipulate an agreed-upon phase-in approach

CAI Goals

- Identify first general education courses
- Develop entry-level competencies
- Develop exit-level competencies
- Identify public policy issues
- Implement plan for public dissemination of competencies

CAI Drivers

- Senate Bill 389 (2007)
- Math, Engineering, Technology, and Science (METS) Coalition
- Missouri Department of Higher Education (MDHE) Strategic Initiative

CAI Membership

Over 400 educators and representatives from:

- Two- and four-year institutions
- Public and independent institutions
- Missouri Department of Higher Education (MDHE)
- K-12 School Districts
- Missouri Department of Elementary and Secondary Education (DESE)

CAI Structure

- Steering Committee
- Voluntary Educator Workgroups in:
 1. Arts and Humanities
 2. Engineering and Technology
 3. English and Communication
 4. Foreign Languages
 5. Mathematics
 6. Science
 7. Social Sciences
 8. Cross-Disciplinary

Process Communications

- Numerous groups kept informed of process, including:
 - Institutional Presidents
 - Chief Academic Officers
 - Higher Education Professional Organizations
 - MoDEC
 - MAC
 - MAFS
 - K-12 School Districts
 - DESE
 - K-12 Professional Organizations
- Official CAI website provides information, updates, and a forum for feedback on draft competencies:

www.dhe.mo.gov/casinitiative.shtml

Entry-Level Competencies

- Access to collegiate-level coursework
- Broad-based knowledge and skills in:
 - Discipline areas
 - Cross-disciplinary foundations
- Align with high school graduation requirements
- Audience: K-12 educators, students, and families
- Math-Gap analysis

Example of Discipline Entry Competencies

Entry-Level Competencies for First Course in Freshman Composition

- 1) **Demonstrate critical and analytical thinking for reading, writing, and speaking purposes.**
 - Participate in active reading and discussion of texts
 - Incorporate ideas and information from readings into own writing
 - Identify purpose, main idea, and supporting evidence
 - Distinguish between fact and opinion
 - Distinguish between general and specific information
 - Summarize and paraphrase information
 - Communicate effectively in groups by listening, reflecting, and responding appropriately

Cross-Disciplinary Entry-level Competencies

- Provide foundation for content knowledge across disciplines
- Organized into several areas:
 - Habits of Mind
 - Reading and Writing
 - Technology and Information Literacy
 - Basic Statistical Knowledge (tentative, under review)

Draft Example of Cross-Disciplinary Entry Competencies

Cross-Disciplinary Entry Level Standards for Habits of Mind

IV. Academic behaviors

1. Accept personal responsibility for education as an active learner (e.g.).
 - Attends class regularly and is on time.
 - Notifies teacher prior to absences when possible and uses legitimate and reasonable excuses.
 - Responsible for all assignments on-time and what is covered in class – both attended and missed classes.
 - Attentive in class and participates in class discussion.
 - Completes all assignments on time and in appropriate format, clean and neat.
 - Prepares for tests and exams.
 - Demonstrates positive affirmation about self learning.

Optimal Entry Competencies

- Many fields require additional preparation for successful and timely completion; particularly Mathematics, Engineering, Technology, and Science (METS) fields
- Should be layered on top of minimal entry-level competencies
- Increase breadth and depth of knowledge in potential fields of interest

Draft Example of Optimal Entry Competencies

Mathematics Optimal Entry Level Competencies for Engineering Program
Note: All calculations should be performed without the use of technology (i.e., calculator). Some examples of skills are provided in parentheses.

1. Algebra and Real Numbers

- Use symbols and operators to represent ideas and objects and the relationships existing between them.
- Understand the relationship between measures of the physical world and be able to convert units in a given problem. (Velocity, distance and time: On a 40-mile car trip to Middletown, NY, you drive the first twenty miles at 40 mph and the last twenty miles at 60 mph. What is your average speed in mph, ft/s, and km/h during the trip?)
- Know and apply the following algebraic properties of the real number system: identity, associative, commutative, inverse, and distributive.
- Express numbers using scientific notation. (Express 0.004312 in powers of 10). Convert numbers from one base system to another (convert 15 to binary and to hexadecimal notation)
- Write a number as the product of factors. (Write 42 as the product of prime factors.)

Exit-Level Competencies

- Beginning postsecondary general education courses
- Skills and knowledge course-based
- Alignment with general education program outcomes
- Audience: higher education policy makers, institutions, higher education faculty, and students

Example of Exit Competencies

Exit Competencies for non-major Introductory Chemistry:

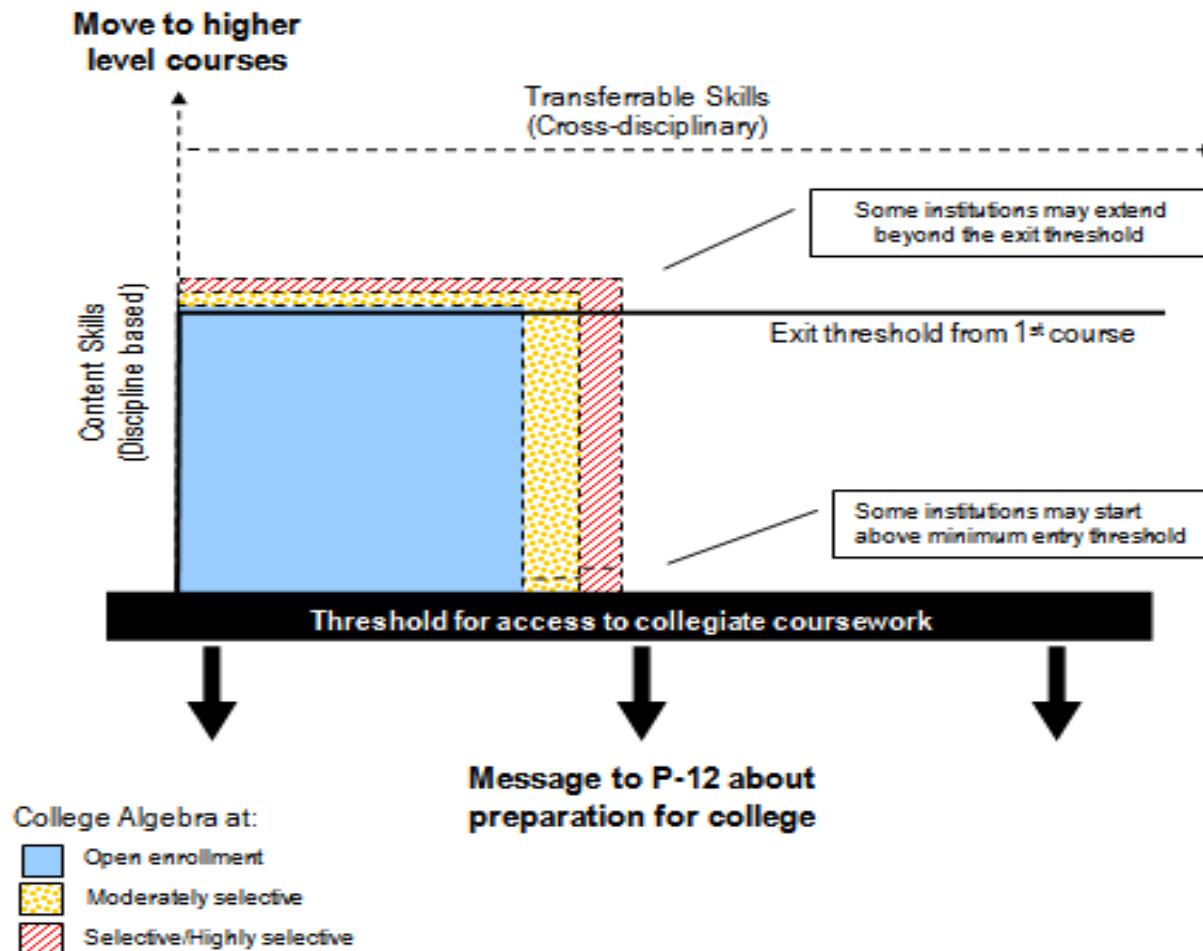
3. Compounds, Formulas, Reactions, and Equations. The student should be able to:

- Classify elemental, ionic, and covalent substances and relate a systematic name to a formula.
- Recognize various reaction types and construct a balanced equation describing the formation of products from reactants.
- Use a periodic table and a balanced chemical equation to convert (reversibly) between mass to moles of a substance and mole to mole conversions for various changes.
- Apply the concept of limiting reactants and the nature of chemical analysis.
- Construct working Lewis structures for simple covalent compounds. Classify types of chemical bonding.

Relation of Competencies to Institutional Selectivity

- Institutions choose mission, level of selectivity
- Collective responsibility for consistent messages to entering students
- Common framework facilitates transfer through minimal thresholds

Entry- and Exit-Level Competencies for 1st College Course Across Diverse Institutions



CAI Next Steps-Competencies

- Development of a second round of course exit competencies
 - Economics
 - Introductory Music
 - Art History
 - Trigonometry
 - Second, Third, Fourth Semester Foreign Language
 - Introductory Physics for non-majors
 - World History
- Public comment period through January 31, 2009 for:
 - Draft Cross-Disciplinary entry-level competencies



CAI Next Steps

Dissemination and Policy

- Development of Dissemination Materials
 - Website
 - Public Presentations
 - Publications
- Begin Public Policy Considerations
- Learning Assessment in Postsecondary Education (LAMP)
- DESE-begin integration into assessment standards and assessment instruments

Public Policy Implications

- Placement
- Assessment
- Transferability of Credit
- Dual Credit
- Teacher Education

How Can We Raise Awareness?

- Familiarize yourself with the nature and content of the CAI competencies
- Consider how your current curriculum intersects with CAI entry-level competencies, both within and across disciplines
- Begin dialogue about how to best prepare students for postsecondary options and meet the minimum threshold of entry-level competencies
- Stay informed about CAI-related updates

Thank you for your participation

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